



Is price regulation the proper way to achieve food security in Belarus?

Summary

This paper addresses the important issue of price regulation for agricultural products in Belarus, and its impact on the welfare of Belarusian citizens. In this context, the issue of national food security arises. We argue that the supply-based definition of food security that is commonly used by policy-makers in Belarus is less rational than the demand-based definition that has become the international standard. Using the latter approach we argue that Belarus is a food-secure country and that a better way to achieve food security at the individual and the household levels would be to provide targeted aid to vulnerable population groups rather than using direct price regulation, which creates market distortions and implicitly taxes farms.

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1. Introduction

Price regulation and food security are two closely linked issues within Belarusian agrarian policy. The state plays an active role regulating agrarian markets: price regulation is one of the most important components of agrarian policy in Belarus along with subsidization. Price regulation leads to both positive and negative outcomes. It is argued that a large fraction of Belarusians is so poor that they rely on low food prices for survival, and that direct regulation of prices is the simplest way to help them. The negative outcomes are decreasing real prices for agricultural products, worsening the financial status of agricultural enterprises and causing food market distortions. What are the net results of this policy? Is the initial assumption that many Belarusians need low food prices for survival correct, and if so, could this problem be solved in a more efficient manner? These issues are discussed below.

2. Price regulation in Belarus

The government would like to make sure that everybody in Belarus has access to food. That is why it regulates food prices. It sets price ceilings for farm products, limits the profitability of processing firms and imposes compulsory mark-ups for food wholesalers and retailers.

Price regulation is one of the most widely practiced agrarian policies of Belarus. The main justification for limiting prices is that even the poorest people should be able to buy sufficient amounts of food products. Later on in this paper we will analyze which social groups are considered insecure in terms of nutrition, but first we shall discuss the mechanisms for regulating prices of farm products now employed in Belarus.

Prices are regulated by many legislative acts among which the most important is the law "On pricing", adopted on 10 May 1999. It favors direct price regulation and allows the government to use such measures such as:

- fixing prices,
- setting price ceilings,
- setting compulsory trade mark-ups,
- setting maximum rates of return,
- determining price-calculation procedures, and
- declaring prices.

Many food products have been put on the so-called "list of socially important products" that is defined by Council of Ministers. In 1999 the list included nearly 20 items, even such unlikely non-staple foods as ice cream. After the list was adopted in 1999 the number of "socially important products" declined steadily and reached a minimum at the end of 2003. Yet since February 5, 2004 the list was broadened again and became even longer than the initial one back in 1999. Currently the list includes about 30 items.

Another law, "On counteracting monopolizing activities and promoting competition", allows the government to interfere in the price setting by enterprises that are believed to be dominant on the national or on local markets. There are special lists of firms that are dominant on the oblast food markets. Unlike in Western countries where competition is monitored and enforced by appropriate anti-monopoly legislation and institutions, in Belarus the Ministry of Economy decides whether an enterprise is

monopolistic or not. The sanction commonly imposed by the Ministry is limiting the profits of the enterprise in question.¹

One more method of limiting prices that was used since 1999 to 2001 is setting maximum rates for price increases. The Council of Ministers defined maximum price increase rates based on the planned inflation rate. No firm was allowed to increase their prices above this level (for instance, 2% a month). Today government only sets so called 'forecasted' inflation rate but firms are inclined not to outreach this rate anyway.

What are the goals of price regulation? Along with providing the poor with cheap food it is believed that keeping prices low is the best way to promote export competitiveness (mainly to Russia), which is considered good for the national agrarian sector and the economy as a whole. But generally farm gate prices are so low that most farms cannot operate at a profit. This reduces agricultural production in Belarus, which actually increases the need for imports (Belarus is a net food importer!) and reduces export surpluses. Low regulated trade mark-ups on food products don't cover the expenses of retail stores, which also end up making losses (Table 1).

Table 1. Efficiency indicators in agriculture and retail

	1990	1995	1997	1999	2000	2001	2002	2003	2004*
Rate of return of sales									
Agriculture	46.4	17.7	14.2	15.7	5	-9.3	-5	-0.4	8.1
Trade and public catering	n.a.	0.1	11.8	16.6	11.3	5.2	6.5	4.9	10.4
Share of loss making enterprises									
Agriculture	0.3	15.4	14.8	45.6	48.8	68.3	65	57.9	38.1
Trade and public catering	3.2**	40.5	12.6	8.8	19.1	25.8	29.6	23.5	32.2

Source: Ministry of Statistics and Analysis.

Note: The rate of return is defined as the ratio of profits from sales to total production costs. An enterprise is considered loss making if its rate of return falls below zero.

* - first half.

** - 1991.

Hence, low farm-gate prices have the same impact as an implicit tax on agricultural enterprises. The results of this 'tax' are plain to see in the large losses that farms experience, the high levels of indebtedness and the low efficiency indicators. To combat these tendencies, agrarian enterprises receive state subsidies, which amount to at least USD 0.5 bn on an annual basis.² To summarize: the agricultural policy in Belarus 'applies the brakes' to agricultural production via price regulation, and then attempts to 'step on the gas' via subsidies, both at the same time. It is clear that this sort of inconsistency is damaging and inefficient. Using these two dissonant policies concurrently, i.e. implicitly taxing agricultural enterprises and then subsidizing them, also reduces the transparency of the whole system. It is very difficult to determine how much an enterprise gets from the government (including free credits and a preferential taxation regime) and how much it loses as a result of price regulation. But it is obvious that most farms and many processing factories are cost-inefficient because they are unable to make the investments needed to improve their operations.

3. Enforced farm gate prices and price parity

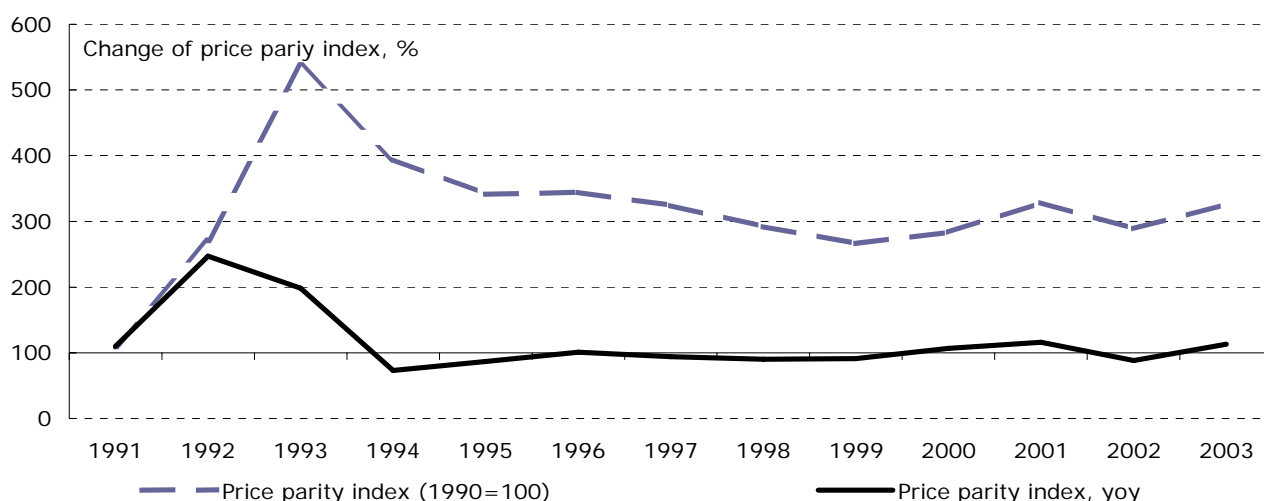
The issue of price parity for agricultural products receives much attention in Belarus. The importance this issue receives in agrarian policy debates is illustrated by the fact that the indices of agricultural output and input prices and the price parity index itself are published regularly in the official statistical bulletins.

¹ At the same time, the Belarusian economic policy favors monopolies. Monopolies inherited from the Soviet past have not been privatized, stifling competition. In many cases the central and local administrations limit competition thus strengthening the monopolies even more.

² For more detail see the study of the German Economic Team in Belarus, "Subsidizing Agriculture in Belarus: Declared Objective and Actual Outcomes", PP/4/03, October 2003.

The issue of price parity is directly related to price regulation. There exists the widespread notion in Belarus that the agrarian sector is disadvantaged because the prices for farm inputs have increased faster than those for farm outputs. For example, it is often mentioned even in academic circles that prices for farm inputs increased over 3 times more than prices for farm outputs since 1990 (Figure 1), resulting in a USD 2.68 bn accumulated loss in 1991-2003 for the national agricultural sector.

**Figure 1. Price parity indices for Belarusian agriculture
(ratio of farm inputs prices to farm output prices) 1991-2003**



Source: Ministry of Statistics and Analysis.

Note: Unlike in Western countries, the price parity index is calculated as the ratio of the farm inputs price increase to the farm output price increase.

It is quite normal that the price parity of agricultural products in Belarus has declined over the recent decade and a half. First, similar trends are found in agriculture all over the world, although not as strong as in the states of the former Soviet Union. Second, and this explains the special situation within the former Soviet Union where prices used to be extremely distorted: Prior to the price liberalization that took place in 1991-1992, domestic prices for farm outputs were far lower than the corresponding world market prices. But the prices for energy and for raw materials were even lower compared to their world levels. Hence, when the Soviet Union collapsed and prices were liberalized, the input prices had to increase much faster than the farm output prices. As can be seen in Figure 1, the major deterioration of the terms of trade for agriculture happened exactly in the early 1990s, when the price structures had to be adjusted to a market that wasn't planned any more. While this certainly hurt agriculture, it was inevitable, as the costs of the direct and indirect subsidies required to prop up the old Soviet price ratios were huge and could not be sustained for long. Indeed, these costs probably played a not insignificant role in the eventual collapse of the Soviet economic system. Analysts who call for a return to pre-1990 price parity for agriculture in Belarus are being quite unrealistic.

The worsening terms of trade for agriculture do not necessarily imply that this sector is now worse off. If the price of a harvester increases twice in terms of grain, but the new harvester harvests 2.5 times more grain than before, that's an improvement. Germany provides an excellent example of how agriculture can benefit despite decreasing price parity. Between 1992 and 1999, the terms of trade deteriorated but over the same period significant improvements in labor productivity took place. In numbers, an 18% decline in relative prices for agricultural products was accompanied by a 54% increase in labor productivity. As a result, labor's terms of trade in German agriculture improved by 26% over the period. These trends have continued, and even accelerated, in the first years of the new century.

It is often argued in Belarus that a so-called 'unfair exchange of goods' exists between different sectors meaning that farmers have to pay too much milk for a liter of fuel, etc. This argument overlooks the fact that the reduction in agricultural terms of trade is a long term, international trend and a 'normal' product of technological change and economic development. Furthermore, it also overlooks the fact that in many developed countries farm inputs are even more expensive in terms of farm output. In Table 2 commodity terms of trade in Belarus and Germany are calculated using producer prices for various agricultural products relative to diesel fuel. Currently Belarusian agricultural producers enjoy better terms of trade than their German counterparts. For example, in order to purchase 1 liter of diesel fuel a German farmer must 'spend' almost 2 times more wheat and 2.5 times more potatoes than his Belarusian counterpart. Declining commodity terms of trade do not necessarily imply that the purchasing power or the profitability of farms must decline. By becoming more productive, farms can counteract the effects of declining terms of trade.

Table 2. Agricultural commodity terms of trade relative to diesel fuel in Belarus and Germany, 2003

Commodity, kg	In Germany	In Belarus
Slaughter pigs	0.49	0.57
Dairy cattle	0.89	0.31
Milk	2.09	2.15
Milling wheat	5.62	3.00
Rye	6.34	4.53
Barley	6.22	4.42
Potatoes	7.11	2.92

Source: ZMP: Osteuropa Agrarmärkte – Aktuell, various issues; Ministry of Statistics and Analysis; own calculations.

The solution for any agrarian price disparity problem, which usually comes to mind first for many policy makers and representatives of farm lobbies is to increase farm gate prices. Many countries have implemented such policies, only to find out that they are very expensive and ineffective in the long run. Agricultural price support can provide farmers with temporary relief, but as the world-wide trend of declining agricultural commodity terms of trade continues, the state would have to provide progressively more and more price support just to maintain a given level of parity. Hence, as the trend continues, the policy becomes increasingly more expensive. Price support policies also lead to conflicts with trading partners and institutions such as the WTO. The better solution is to concentrate policy measures on reforming and restructuring the agricultural sector and on improving agricultural education, research and extension. Together, these measures will increase the productivity of farms, enabling them to cope with the declining parity. But regardless of the position one takes on the issue of price support for agriculture, the fact remains that Belarus currently does exactly the opposite of supporting farm prices: as outlined above it actively depresses them. Simply allowing farmers in Belarus to receive liberalized prices at world market levels (i.e. releasing the brakes) would improve price parity and benefit farms considerably.

4. The impact of price regulation on food security and on vulnerable groups

The main justification for using direct price regulation in Belarus is based on the belief that it leads to lower food prices and hence benefits poor people. In other words, low food prices are thought to contribute to national food security. Are low food prices indeed important for food security in the current Belarusian context? Do the positive impacts of price regulation such as the availability of cheap food for the poorest citizens outweigh the negative impacts on efficiency, production and trade outlined above?

4.1 Food security

Food security is one of the central concepts underlying Belarusian agricultural legislation. The definition of food security is based on production. It states that the country is food secure when 85% of the food products from 9 major groups (grains, potatoes, vegetables, fruit, vegetable oil, sugar, milk, meat and eggs) are produced domestically.

This sort of aggregate, supply-based definition of food security is seen as being out of date within the international political and scientific communities. What use is a high ratio of domestic production to consumption, when the domestic production is itself highly dependent on imported inputs, in particular energy? Currently, Belarusian agriculture is highly dependent on energy imports that come almost exclusively from Russia. Paradoxically, Belarus would be more food secure if it depended instead more strongly on food imports from a much greater variety of other nations (e.g. members of the EU and Ukraine, as well as Russia).

The definition of food security used in Belarus also ignores the fact that even if a country is a net exporter of food, some vulnerable low-income groups within the population might still suffer from malnutrition. Modern definitions of food security focus on households and individuals, and not on aggregates that might look acceptable on average while hiding significant variation. The government should not forget that having a well-nourished - and therefore healthier - population is more important than reducing food imports. Thus, an adequate grain or meat production in a certain region or country is neither a sufficient nor a necessary condition for the food security of all the households and individuals in that region. Indeed, history has shown repeatedly that terrible malnutrition and starvation can occur in the midst of plenty, if people do not have the means or are not permitted access to food.³

Commenting on a survey of CIS countries⁴, an expert with the Food and Agriculture Organization of the United Nations, David Sedik, points out that: "All these countries produce satisfactory amounts of food products, shops are full with everything people need but they lack the money to buy it". According to Sedik, individuals with low salaries and pensions are most vulnerable to under-nutrition. Especially threatened are families with children. Under-nutrition can lead to a lack of iodine and iron in the organisms of children. As is the case all over the world, the consumption of products in physical terms by quintile groups shows that Belarusians too tend to consume more products as their incomes rise (Table 3).

**Table 3. The annual consumption of food products
in Belarus by quintile groups in 2003**

Product, kg	Quintile groups					Average consumption
	Lowest	2	3	4	Highest	
Bread and flour products	98.1	108.4	110.1	112.5	107	106.9
Milk and milk products	198.9	260	288.9	323.5	348.8	280.6
Meat and meat products	32.7	47	53.9	65.4	78.1	54.4
Fish and fish products	9.9	13.4	14.9	17.6	21.2	15.1
Vegetable oil and butter	8.6	10	10.6	11.1	11.9	10.4
Eggs (number of)	143	180	197	215	235	192
Potatoes	80.1	85	86.8	88.9	81.6	84.4
Vegetables	57.6	74.2	81.9	90.6	102.8	80.4
Fruits and berries	17.2	28.1	36.2	44.7	68.4	37.8
Sugar and sweets	15.7	20.4	22.8	25.1	28.4	22.2

Source: Ministry of Statistics and Analysis.

³ A recent Nobel Prize in Economics was given to Amartya Sen inter alia in recognition of his work on food security and the causes of famine. Sen was the first to clearly document that most famines have much more to do with constrained demand than with supply problems.

⁴ The survey covered the CIS (except Russia) and Eastern European countries. Hunger rating in "Novyye Izvestiya", May 25, 2004.

As persons move to higher quintile groups, they start to consume more food products than before. This is the case for every quintile group and every product except for the consumption of bread and potatoes by the highest quintile group. The consumption of these products falls when income crosses a certain line. Concerning all other products, consumption rises as income grows. The poorest people consume about half the sugar and sweets, eggs, fish, and vegetables, and nearly a quarter of the fruit that well-off people do. Obviously, poor people not only consume less food measured in kilograms but they are also inclined to buy cheaper products. These cheap products are often of a lower quality and nutrition value than the more expensive products that poor people simply cannot afford. Household surveys prove that members of the lowest quintile group consume 1.5 times fewer calories than members of the highest group (2087 and 3040 calories a day correspondingly in 2003).

According to Ministry of Statistics data (Table 4) 70 to 80 % of the population receive incomes that are lower than the minimum consumption budget. This minimum consumption budget is defined in the national legislation as the value of a certain basket of goods and services required to meet the minimum physiological and social needs of a person of a certain sex and age.

Table 4. Share of the population with disposable resources below the minimum consumption budget and subsistence level budget, 1996-2003

Share of population with disposable resources below:	1996	1997	1998	1999	2000	2001	2002	2003
Minimum consumption budget	81.9	76.9	74.5	79.2	76.8	70.4	71.1	n.a.
Subsistence level budget	38.6	32.1	33	46.7	41.9	28.9	30.5	27.1

Source: Ministry of Statistics and Analysis.

What is still more important in defining the line below which the existence of a person may be threatened is not the value of the minimum consumption budget but rather the value of the subsistence level budget. Prior to 1999 the subsistence level budget was defined simply as 60% of the minimum consumption budget. Since 1999 it has been estimated separately but its ratio to the minimum consumption budget has remained at 60%. Recently the share of the population below this subsistence level has stayed at around 30% (Table 4). This must be an overestimate because there are no visible signs of such widespread under-nutrition in Belarus. If the government intends to provide poor people with food, it will need more exact indicators of income levels below which citizens may suffer from under-nutrition.

4.2 Defining vulnerable groups

The food security of an individual primarily depends on his or her endowments, working capacity and other production factors, and on his or her exchange entitlements, i.e. the ability to exchange these endowments for food. Hence, food security can be endangered by any decrease in a person's endowment (e.g. alienation of land, or loss of ability to work due to ill health), or due to an unfavorable shift in the exchange entitlements caused by a loss of employment, a fall in wages, a rise in food prices – for which a bad harvest is just one possible reason – a drop in the price of goods or services the person sells or a decline in self-employed production. The failure of any of these entitlements can threaten the food security of an individual or household. The following social groups are likely to be at risk of under-nutrition:

- Low income households (Low-wage earners and pensioners)

Families from the lowest quintile group spend 51.1% of their total consumer expenditures or BYR 94,700 on food monthly. The country averages are 45.8% and BYR 143,500 correspondingly. It turns out that representatives of the lowest quintile group consume far less calories than the rest of the population. In 2003 calorie intake per person per day for the lowest quintile group was 2087 calories and for the second

quintile group – 2503 calories. The difference in daily calorie consumption between second and the highest quintile group is only another 500 calories.

- Households with no income earners / pensioners

Results of the survey of households prove that food products amount to 58.8% (BYR 90,100) of the total consumer expenditures in households without an income earner. Many of these households consist of one or two pensioners. On average, pensioners spend 57.5% of their total consumer expenditures on food but the sum is considerably larger – BYR 129,600. Moreover, pensioners usually have good access to private plots and consume more self-grown products than any other social group. Measured in kilograms, their level of consumption is higher than that of other people who don't have as much free time. More vulnerable to under-nutrition than pensioners are unemployed or handicapped people. The same holds true for employees faced with wage arrears but fortunately such arrears have not become too common in Belarus.

- Members of households with only one income earner and dependent children

This group consists mostly of single parent households, the number of which increases as divorce becomes more common. Such households spend BYR 124,200 on food on a monthly basis, which is 45.5% of their total consumer expenditures. Child health depends on adequate nutrition more than adult health. Under-nutrition of children caused by low incomes of the parents will reduce their productivity and burden the public health care and social security systems in the future.

- Rural households

Members of rural households consume more or less the same amounts of food products as members of urban households. Yet average monthly family expenditures on food are considerably lower in rural areas than in cities – BYR 99,500 and BYR 166,000 correspondingly. In Minsk, the average household spends BYR 214,400 on food on a monthly basis. Concerning food consumption in kilograms per person, Minsk residents consume nearly 2 times more than the rest of the population. Expenditures on food are lower in rural areas than in cities for several reasons. Firstly, the wages and quite often the pensions in rural areas are considerably lower than in cities. Secondly, and based on the above, rural households can only make a living by growing their own crops and producing their own livestock products such as milk and eggs. Rural households consume a very high percentage of self-grown products. Elderly and/or disabled people in rural areas pose a special problem since they are often unable to work private plots.

- Households which have no access to a garden plot

There are two major crops in Belarus, wheat and potatoes. While wheat is produced predominantly on large farms, potatoes are typically grown in private gardens. The same holds true for fruit, vegetables and to large extent for milk and eggs. The access to these production resources still represents the most important insurance for low-income people. Generally, it can be assumed that it is the urban poor who are at a higher risk to have poor access to food, while the rural poor suffer rather from lacking access to health services and education. But as discussed above, the elderly and disabled people in rural areas are also threatened.

- Individuals with low incomes and no support from relatives

The family is still an important safety net for elderly or disabled persons. Grandparents often receive support from their working children or grandchildren, because the pensions are sometimes very low. Pensioners without children or with disrupted family ties are at high risk, as are single parents with children.

This list could be continued. The more of these characteristics an individual or a household shares, the more likely it is that this household will be prone to nutritional problems. It is important to recognize that this is not only the case when there is a grain shortage in the region. The calorie intake of the poorest Belarusians does not depend on good or bad harvests. In 1999 the agricultural output fell by almost 20% in Belarus while the calorie intake, both by the poorest people and the average, remained at the same level as before. From 1990 to 2003, agricultural production fell by 22 percent in Belarus. However, during the same period the per capita caloric consumption fell only by between 10 and 20 percent (according to different estimates).

Representatives of the lowest quintile group consume about 2000 calories per day. Even when taking into account that there are small children among the household members, this nutritional level is insufficient. The rest of the population consumes more than 2500 calories a day, which can be considered sufficient. The fact that so many Belarusians receive such a low caloric diet is surprising, since chronic hunger does not seem to be an obvious problem in Belarus. Only biometric measurements among members of vulnerable groups can determine whether under-nutrition is a widespread fact – and not simply a statistical anomaly caused by under-reporting of the food intakes in household surveys.

Biometric studies haven't been carried out in Belarus so far. Experts of the Food and Agriculture Organization of the United Nations state that the percentage of food inadequacy in Belarus is less than 2.5.⁵ This estimate is based on commodity balances and income distribution. The same estimates show that the share of the population that lacks adequate food in Russia and Ukraine is twice as high as in Belarus.

It follows that the common notion that low food prices are the best way to help the poor is misguided. It is only a relatively small fraction of the population that is at risk of severe under-nutrition in Belarus (not more than 2.5%), and it is important to recognize that this group also suffers when food prices are low, not just in years of bad harvests. About 20% of the population receives a low caloric diet that is based mostly on cheap products such as bread, potatoes and self-grown vegetables. The groups most vulnerable to under-nutrition are the elderly and disabled people with no support from their families, single women with children and the chronically unemployed.

5. Conclusions and recommendations

Price regulation for agricultural products in Belarus leads to low prices and consequently causes losses to agricultural enterprises, processing firms and trade. These negative effects of price regulation are not being offset even by the very substantial subsidization of agriculture that occurs in Belarus. Price regulation is inefficient not because it decreases the price parity of agricultural products in favor of raw materials and machinery, as is often argued, but mainly because it leads to losses and therefore to underdevelopment in the agricultural sector.

It is widely believed that low food prices based on price regulation are good for poor people. However, keeping prices for food low in order to increase the access of poor people to food is not a target-specific policy. Low food prices benefit the rich as well as the poor. The fraction of Belarusians that may in some way fall in the under-nutrition category, and thus need low food prices for survival is not higher than 20%. The group most vulnerable to under-nutrition is composed of the elderly, disabled people with no support from their families, single women with children and the chronically unemployed.

⁵ David Sedik, Doris Wiesmann. Globalization and Food and Nutrition Security in the Russian Federation, Ukraine and Belarus. ESA Working Paper No. 03-04. www.fao.org/es/esa.

Recommendations:

1. Gradually liberalize food prices and proportionately decrease the volume of subsidies given to agricultural enterprises.
2. Boost investments in agricultural education, research and extension considerably to create a long run basis for productivity increases in the sector. This is the only sustainable way to help farms deal with the consequences of declining agricultural terms of trade (parity) in the long run.
3. Increase the efficiency of agricultural producers by implementing reforms in the sector. Increase competition in the input supply and food processing industries by eliminating state monopolies. This will ensure that farmers get the best conditions when they buy inputs and sell their products. Enforcing bankruptcy in agriculture and permitting farmland to at least be leased (if not bought and sold) will ensure that efficient farms can grow while inefficient farms contract.
4. Launch strictly targeted income support schemes to ensure that all individuals who are vulnerable to under-nutrition have access to food.

Authors: Dzmitry Babicki, Stephan von Cramon-Taubadel

Lector – Ricardo Giucci

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